THE OFFICIAL MAGAZINE OF THE OCEANOGRAPHY SOCIETY

Oceanography

CITATION

Career profiles—Options and insights. 2012. *Oceanography* 25(3):228–230.

CAREER PROFILES Options and Insights

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Degree: When, where, what, what in?

I received a Bachelor of Arts degree in physics from Augsburg College in 1977, and a PhD in physical oceanography from the University of Washington (UW) in 1988. The journey was fun. While at Augsburg, my advisor's research at the University of Minnesota provided the opportunity for summer and research jobs helping that group build electron guns and detectors for rockets to study the mechanics of the Aurora Borealis. For Masters work at UW, I got to help build pressure sensor systems that measured part-per-billion tilts in sea level across three choke points in the Antarctic Circumpolar Current to study what drives the current. For PhD work at UW, I had the chance to work on conductivity-temperature-depth sensors for towed systems, and several iterations of new free-fall turbulence sensors and profilers to study the relationship of turbulence to the fine-scale density field and large-scale forcing functions. I was fortunate to work with very smart advisors and students who shared their skills at solving problems and fueled my passions. Sprinkled throughout the school career was a host of "paying" jobs, from cook to draftsman, that rounded out my experience.

Did you stay in academia at all, and if so, for how long?

No. I had accepted a joint postdoc with Dalhousie University and Bedford Institute of Oceanography, but I had also been offered a partnership position at Sea-Bird Electronics. From the earliest age, I knew that I wanted to be a scientist and had spent my life preparing for academia. But the projects I had worked on made it clear that I was truly happiest building instruments and improving measurements. After much soul-searching, I declined my postdoc and took the business offer. It felt terrifying to disregard counsel and switch career paths. But with 24 years of hindsight, I have no regret.

How did you go about searching for a job outside of the university setting?

For me, the experiences working on several research projects and jobs throughout college and graduate school turned out to be my job search. Being open about skills and seeking a sense of fulfillment shaped my decision. I had been working part time at Sea-Bird while I finished my dissertation, and they came to me with a job offer—that I finally accepted.

Is this the only job (post-academia) that you've had? If not what else did you do?

I've had several jobs, but all within Sea-Bird Electronics.

What is your current job? What path did you take to get there?

I am President of Sea-Bird Electronics. I get involved in daily business, the company's strategic directions, and policy decisions for customers. I am staff cheerleader for the company mission

and promoter to our customers. What I particularly like is still being able to contribute to sensor design and problem solving, and getting involved with "our" scientist's work. It's not a boring job, and a rule I've learned is that "the day rarely goes to plan."

The path through Sea-Bird started as a company scientist tackling analytic flow problems, sensor responses, and measurement errors, and acting as a liaison to the science community. As Vice President for Science, I began managing a group working on these problems and helped build a saltwater calibration facility and standards laboratory. As Executive VP, the company's strategy and senior management team came into my realm.

With the sale of Sea-Bird Electronics four years ago to Danaher Corporation, we are taking on the additional job of growing another company—Sea-Bird Scientific—comprised of top-tier instrument companies that serve ocean and freshwater scientists, responding to customers' demands for more integrated systems.

Is the job satisfying? What aspects of the job do you like best/least?

Yes, and I hope my enthusiasm shows. The best part of my job is helping people much smarter than me do great things. It is exciting every day to see what our engineers can develop and our production staff can build with consistent care. They get very vocal if I make changes that they think might compromise quality—what a great challenge to have. But the biggest reward is watching what problems scientists are solving with our instruments. Ken Lawson, prior President and my mentor at Sea-Bird, said, "You gave up academia, but may have found a way to be more effective in academia than you planned."

What did your oceanographic job give you that is useful in your current job?

Problem-solving skills, experience managing projects, and telling a useful story with messy data. In many things, there is often no right answer but a family of solutions.

Do you have any recommendations for new grads looking for jobs?

Take advantage of every opportunity early in your education to try out things. It is how you find your talents and passion. Then, follow them into a career. Because anything worthwhile takes a tremendous amount of work and dedication, it's easier when you are following your passion, and the result shows in your attitude. Coworkers rally, and employers respond with more interesting work and opportunities, which lead to financial security as well. Stay open—expect to do something different than you planned.

DEB GLICKSON | Senior Program Officer, Ocean Studies Board, National Research Council (dglickson@nas.edu)

Degree: When, where, what, and what in?

I completed a BS in geology at the University of Florida (Go Gators!) in 1997. My undergraduate advisor studied mid-ocean ridges and hydrothermal vents, and his videos of black smokers and tubeworms sucked me right into marine geology. I earned an MS in geology at Vanderbilt University in 1999, researching microplate evolution. I completed my PhD at the University of Washington in 2007, studying the tectonic and magmatic evolution of mid-ocean ridges and hydrothermal vents.

Did you stay in academia at all, and if so, for how long?

I did not stay in academia at all, and I'm not sure it was ever truly part of my planned career path. When I finished my MS, all I wanted was a job and a paycheck. I had no intention of going back for a PhD. After working for a few years, I missed marine geology and decided that my job prospects would be better with a PhD (seriously! What was I thinking?).

How did you go about searching for a job outside of the university setting?

I definitely didn't apply the scientific method. My boyfriend really wanted to move back to his hometown of Washington, DC, and I had been vaguely thinking about applying for a science policy fellowship. A few years before I defended my dissertation, I had the opportunity to be on a research cruise with a National Science Foundation program manager, and her job sounded so interesting. I thought a fellowship might get my foot in the door for a

government job. I ended up applying for and accepting a John A. Knauss Marine Policy Fellowship, which is run by the National Oceanic and Atmospheric Administration's Sea Grant Program. After interviewing with a multitude of Congressional offices during an exhausting placement week, I chose to be placed

in the office of a very conservative Senator from Louisiana. It was an eye-opening experience. I learned so much about politics and how science does (and does not!) influence policy decisions. I hadn't really known very much about policy or politics, so it was an extremely valuable crash course in how the US government works.

Is this the only job (post-academia) that you've had? If not, what else did you do?

Between my MS and PhD, I spent two years working for the Woods Hole Oceanographic Institution as a Physical Oceanography Research Associate. It was really interesting work—I worked with gliders, taught myself some basic programming, went out on some really crazy research cruises (pirates!), and learned a lot about physical oceanography and engineering. This job served me well when I went back to school for my PhD and worked in a very multidisciplinary group that spent a lot of time at sea.

What is your current job? What path did you take to get there?

I am a Senior Program Officer for the Ocean Studies Board of the National Research Council, which is part of the US National Academy of Sciences. The National Research Council is a nonprofit, nongovernmental organization, and we provide independent, objective science and technology advice to the federal government. My job is to bring scientific experts together to help solve issues in which federal agencies are interested, and it is super interesting. The experts we work with are all volunteers and are among the best in their respective fields, and they bring passion and energy to whatever task they have been asked to do. I help them come to consensus around the issue and assist them in writing a report for our sponsoring federal agencies. I feel strongly that my organization is an important way for scientists to help provide advice to the government, and I personally like engaging in the "policy" without the "politics." My favorite parts of the job are working with the volunteers, who are amazing scientists and dedicated people, and learning about each new project. I've been able to participate in studies as far ranging as ocean research infrastructure, the tsunami warning system, scientific ocean drilling, methane hydrates, and future questions in physical oceanography. I found out about the National Research Council when the board provided an information session for my class of Knauss Fellows, and I immediately thought, "This is the job I want." When an Ocean Studies Board position became available, my interests and skills happened to be a good fit with board needs. In addition to a strong scientific and technical background in oceanography, I understood the political system and how policy decisions are made. I've been in my position for four years and still enjoy coming to work every day!

What did your oceanographic education (or academic career) give you that is useful in your current job?

As an oceanographer, I learned so much more than science. Because I spent a lot of time at sea, I had to learn to work with difficult personalities, deal with bad weather, and fix instruments that didn't want to operate (all while being seasick). Research cruises are strong team environments, and they definitely helped me learn to solve problems, work with other people, compromise, and prioritize. In addition, my experiences during graduate school and in my position at Woods Hole Oceanographic Institution allowed me to build a large network of oceanographic experts that I can now draw on in this job. I feel fortunate to have gone to sea with a lot of fantastic people, and I call on them for committee service or for suggestions regarding experts to contact in a particular field.

Is the job satisfying? What aspects of the job do you like best/least?

My position is very satisfying, because I truly believe that I am helping the government to make better decisions about science policy. While we are not engaging in research itself, the committees I work with use current scientific research to assist decision makers who may not have any scientific background or understanding. The only downside of my job is that we are soft money, so we constantly write proposals to keep ourselves funded. It is not so different from academia in that respect.

Do you have any recommendations for new grads looking for jobs?

Be open to possibilities! It is important to recognize that you have gained skills and strengths outside of pure research, but that you might have to be creative in describing the many things you can do. I'd also look very strongly at fellowships, and be aware of their qualifications and deadlines. (Do you have to be a current student? Do you have to have a PhD in hand before applying?) Based on my lab mates and graduate school cohort, fellowships have been the most valuable tool to gain experience and attain jobs.